AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 5, line 16 with the following rewritten paragraph:

The P972 gene of the present invention includes, if necessary, the P972 gene modified to express the protein (SEQ ID NO: 2) expressed by the wild type P972 gene (SEQ ID NO: 1) or other proteins that are functionally equivalent to the same as well as the wild type P972 gene (GenBank Accession No.: AF078078 listing SEQ ID NOS: 1 and 2 corresponding to the cDNA and amino acid sequences, respectively, for human wild-type P972). The wild type human P972 cDNA (SEQ ID NO: 1) can be produced from the known P972 DNA sequence by using polymerase chain reaction (PCR).

Please replace the paragraph beginning on page 6, line 21 with the following rewritten paragraph:

To construct recombinant adenovirus that can produce the P972 protein (SEQ ID NO: 2) which is related to the growth arrest and DNA damage of cells, it is necessary to eliminate E1 region from the adenovirus genomic DNA and to insert an expression cassette including the wild type P972 gene (SEQ ID NO: 1) inside instead of the region.

Please replace the paragraph beginning on page 7, line 12 with the following rewritten paragraph:

The expression vector, pxcx2dCMV-p972 that can express P972 protein (SEQ ID NO: 2) is constructed by inserting the wild-type human P972 cDNA (SEQ ID NO: 1) obtained by PCR between HindIII and XhoI restriction enzyme sites of the polycloning site of the above-mentioned pxcx2dCMV expression vector (Figure 1).

Please replace the paragraph beginning on page 11, line 2 with the following rewritten paragraph:

Figure 2 is a Western blot photograph showing the production of the P972 protein (SEQ ID NO: 2) in the MCF7 and HeLa cell lines infected with recombinant adenovirus constructed by using the adenoviral expression vector of the present invention.

Please replace the paragraph beginning on page 11, line 9 with the following rewritten paragraph:

Figure 4 is a graph showing the growth inhibition of a colon cancer cell line RKO by the P972 protein (SEQ ID NO: 2) produced from the adenovirus AdP972 of the present invention.

Please replace the paragraph beginning on page 11, line 12 with the following rewritten paragraph:

Figure 5 is a graph showing the growth inhibition of a breast cancer cell line MCF7 by the P972 protein (SEQ ID NO: 2) produced from the adenovirus AdP972 of the present invention.

Please replace the paragraph beginning on page 11, line 15 with the following rewritten paragraph:

Figure 6 is a graph showing the growth inhibition effect of a cervical cancer cell line HeLa by the P972 protein (SEQ ID NO: 2) produced from the adenovirus AdP972 of the present invention.

Please replace the paragraph beginning on page 12, line 2 with the following rewritten paragraph:

The expression vector pxcx2dCMV was used to construct the adenovirus expression vector containing the wild-type P972 gene. The wild-type P972 cDNA (SEQ ID NO: 1) of 0.5 kbp in size was obtained by PCR. After digested this cDNA with the restriction enzymes HindIII and XhoI, the cDNA was inserted into pxcx2dCMV expression vector digested with the same restriction enzymes to prepare adenovirus expression vector pxcx2dCMV-P972 (Figure 1).

Please replace the paragraph beginning on page 12, line 10 with the following rewritten paragraph:

After inserting the P972 gene (SEQ ID NO: 1) into the vector pGEX4T (Pharmacia Inc.) that can express the P972 gene in E. coli, the P972 protein (SEQ ID NO: 2) was expressed in E. coli. The antibody against the P972 protein was prepared by inoculating rabbits with the purified P972 protein.

Please replace the paragraph beginning on page 12, line 16 with the following rewritten paragraph:

To construct the recombinant adenovirus that can produce P972 protein (SEQ ID NO: 2) by infecting the cells, adenovirus expression vector pxcx2dCMV-P972 along with adenovirus backbone plasmid pBHG10 (Provided by Dr. Dong-Soo Im at Korea Research Institute of Bioscience and Biotechnology, Taejon, Republic of Korea) was transfected into the packaging cells, 293 cells, by the calcium phosphate method. The co-transfection was performed in a 60 mm-diameter culture dish, and the plaque formation by the virus was observed. To examine whether the constructed adenovirus AdP972 can produce P972 protein (SEQ ID NO: 2), AdP972 was infected in the breast cancer cell line, MCF7 cell line and the cervical cancer cell line, HeLa cell line and then cultured for 48 hours. Western blot analysis was performed with the antibody prepared in Example 2 to examine the expression of P972 protein (SEQ ID NO: 2) in the cultured cells.

Please replace the paragraph beginning on page 13, line 16 with the following rewritten paragraph:

To confirm the expression of the P972 protein (SEQ ID NO: 2) in the cell line infected with adenovirus constructed in Example 3, Western blot analysis was performed. The cells, treated with AdP972 as a concentration of 100 pfu/cell, were lysated in SDS lysis buffer solution [62.5 mM Tris-HCl (pH 6.8), 2% sodium dodecyl sulfate, 5% beta-mercaptoethanol, 10% glycerol, 0.01% bromophenol blue]. Fifty microgram of intracellular protein was separated by 14% SDS

polyacrylamide electrophoresis and transferred onto a PVDF filter paper (Millipore Co.). The above filter was blocked with phosphate buffer solution containing 0.1 % Tween 20 and 5% skim milk. The protein was identified with the anti-P972 antibody prepared in the above Exmaple 2 and marked with horseradish peroxidase conjugated anti-rabbit antibody (Jackson Immunoresearch Inc.). The protein band was visualized by observing the enhanced chemiluminescence using the ECL kit (Amersham Co., Figure 2).

Please replace the paragraph beginning on page 14, line 21 with the following rewritten paragraph:

After the MCF7 cell line was treated with adenovirus AdP972 or AdGFP at a concentration of 100 pfu/cell, the cells were grown for 36 hours. The cells were observed through the phase contrast microscope and fluorescence microscope. The cell growth was greatly inhibited by the expression of P972 (SEQ ID NO: 2) (Figure 3).

Please replace the paragraph beginning on page 15, line 8 with the following rewritten paragraph:

The result shows that the cell growth was greatly inhibited by the expression of P972 (SEQ ID NO: 2) in the above three cancer cells and that the P972 gene (SEQ ID NO: 1) has more significant effect than p53 in anticancer activity (Figures 4,5 and 6).